

# THE DER CHRONICLE

[www.eren.doe.gov/der](http://www.eren.doe.gov/der)

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## What's News With DER?

### Energy Bills Introduced in CA

*State Elected Officials Call for Use of Distributed Energy Resources as Part of Solution to Energy Crisis*

On February 7, 2001, State Senators Bill Morrow (R-San Juan Capistrano and Carlsbad) and Dede Alpert (D-San Diego) introduced **SB 35, the Omnibus Distributed Energy Resources and Clean Electricity Act of 2001**. This act would "provide a comprehensive framework for the use and management of distributed energy resources [DER]," specifically addressing the need to establish DER rate schedules with utilities, adopt "simplified interconnection standards" no later than May 1, 2001, and expedite the implementation of distributed generation facilities. Under the legislation, there would be a state-mandated local program, as these interconnection standards would apply to municipalities, and customers would be compensated by electric corporations for the value of DER that provide grid benefits.

The State Senate amended **SB 5**, a public utilities appropriations bill, on February 5, 2001. Senators Byron Sher (D-Stanford), Debra Bowen (D-Redondo Beach), and John Burton (D-San Francisco) originally introduced the bill on January 17, 2001, in an effort to "assist in energy conservation and efficiency, energy generation, and peak demand reduction capacity...thereby preventing or mitigating an emergency situation." The bill would authorize, until January 1, 2004, state and local agencies to enter contracts and establish projects for the purchase and installation of cogeneration and distributed energy generation equipment or facilities owned or leased by certain public agencies. Among the appropriations listed in the legislation, the following would be authorized specifically for DER:

- To the Public Utility Commission (PUC) for allocation to investor-owned-utilities:

- \$29.2 million to encourage the purchase of small, renewable electricity generation systems and water delivery systems
- \$58.4 million to encourage installation of environmentally preferable distributed energy generation systems for state and municipal buildings

- To the State Energy Resources Conservation and Development Commission:

- \$10.8 million to encourage the purchase of small, renewable electricity generation systems
- \$21.6 million to encourage installation of environmentally preferable distributed energy generation systems for state and municipal buildings
- \$100 million to provide incentives for purchase of large renewable and environmentally preferable distributed generation systems
- \$3 million to assist local governments in expediting the permitting of electricity generation facilities

- To the Department of General Services:

- \$50 million for programs to install environmentally preferable distributed generation systems at state buildings

- To the Department of Corrections:

- \$17.5 million to install environmentally preferable distributed generation systems at department facilities

State Senators Burton and Sher also introduced **SB 33, the California Transmission Authority Act, on February 6, 2001**. This bill would create the California Transmission Authority (CTA), which would own and operate the assets of the transmission grid and take on the responsibilities of the Independent System Operator (ISO) and Power Exchange (PX), thereby eliminating the ISO and PX. Under this act, the CTA would be prohibited from taking action to discriminate against clean, efficient distributed generation and would be required to encourage renewable sources and clean and efficient distributed generation. To read these bills in their entirety, please visit the California State Assembly's Web site at [www.assembly.ca.gov](http://www.assembly.ca.gov).

### Industry News

**Catalytica Energy Systems, Inc.**, announced on February 8, 2001, that its Xonon Cool Combustion gas turbine operating at Silicon Valley Power, received an ultra-low emissions

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performance evaluation from the U.S. Environmental Protection Agency (EPA). The EPA determined that Xonon has the ability to deliver a near-zero emissions solution for gas turbine production, recording NOx emissions of less than 2.5 parts per million and ultra-low emissions of carbon monoxide and unburned hydrocarbons. The turbine used for the evaluation is a Kawasaki M1A-13A, and Xonon will provide three Kawasaki M1A-13X turbines, slightly modified for commercial use, in late 2001 for a Massachusetts healthcare facility.

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**Capstone Turbine Corporation** announced fourth quarter earnings of \$7.1 million during the fourth quarter last year. This is an increase from fourth quarter revenue for 1999 of \$5.4 million. The growing interest in distributed generation and Capstone's expanded efforts in the microturbine industry have led to the increase.

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**DuPont** has formed a fuel cell business, DuPont Fuel Cells, to develop and commercialize the use of proton exchange membrane (PEM) fuel cells in portable, stationary and transportation applications. The company plans to serve fuel cell system developers with new products, including PEM fuel cell stack components such as membrane electrode assemblies and conductive plates. It is also active in the development of direct methanol fuel cell technology.

**PPL Spectrum**, a subsidiary of PPL Corp., is working with the City of Allentown (PA) Wastewater Treatment Plant to reduce energy and operational costs through the use of microturbines. Twelve microturbines, supplied by Capstone Turbine Corp., will convert biogas into electricity and heat that can be used in the treatment process. The Allentown facility serves 14 townships and boroughs (population of about 195,000), and PPL's goal is to supply about 18 percent of the plant's electrical power with the microturbines. The system is expected to be fully operational by the end of February 2001.

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**Caterpillar's** engine division has accounted for 12 percent of the world's newly installed generation capacity in 1999, according to the company. In the last 60 days, Caterpillar and its dealers have installed well over 200MW of rental power throughout the West Coast U.S., alleviating some of the power system strain. This capacity, packaged by Caterpillar in easily transportable power modules, can be deployed as load requires. During 2000, the Cat Rental Power network rented over 1000 megawatts to the utility sector and sold nearly 20 gigawatts -- roughly equal to nine times the power produced by the Hoover Dam. Caterpillar sales of such systems have been growing at an annual compound growth rate in excess of 20 percent for the past five years. The company expects similar growth going forward, with electric power sales targeted to nearly triple from about \$2.3 billion in 2000 to \$6 billion by mid-decade.

## Feature of the Week

### U.S. Congress, White House, Western Governors Examine Energy Crisis

*Western Governors Recommend Short- and Long-term Remedies (including DER-related actions)*

Last week, the U.S. Congress, White House, and governors of ten Western states made efforts to examine the energy crisis in California and the Northwestern U.S. The **Senate Energy and Natural Resources Committee** heard from energy and utility company executives in a hearing on January 31. The **House Energy & Power Subcommittee** Chairman announced plans to hold a hearing in late February. **President Bush** announced the formation of an energy working group to be chaired by Vice President Cheney. Ten **Western governors** met with Energy Secretary Spencer Abraham and other top energy officials in Portland, Oregon, February 1-2 to map out a strategy to ease the strain on the power grid serving the western region and to try to reduce soaring power prices.

#### Western Governors' Energy Policy Roundtable

Governors from 10 Western states (California, Idaho, Arizona, Alaska, Montana, Nevada, Oregon, Utah, Washington, and Wyoming) participated in the Energy Policy Roundtable meeting. As a result of this meeting, the governors have adopted **short-term steps** to remedy the immediate electricity crisis and **long-term measures** that would ensure reliable and secure energy supplies. These measures are posted on the Western Governors' Association website at [http://www.westgov.org/wga/press/energy\\_agree.htm](http://www.westgov.org/wga/press/energy_agree.htm). Thirteen short-term recommendations are outlined; including one that specifically addresses distributed energy resources (DER):

“Ask state and tribal public utility commissions and non-jurisdictional utilities to **eliminate barriers to clean distributed generation** that can be in place in the next 12-24 months. Distributed generation includes small turbines

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(e.g., less than 5 MW), high efficiency co-generation, fuels cells, etc. that are typically installed on the consumer's property, a practice sometimes referred to as net metering. Utilities have frequently blocked the installation of such technologies through cumbersome business practices or complex and inconsistent requirements for connecting such generation to the transmission grid. Requirements to ensure safety and reliability of the grid should remain in place."

Several policies to develop long-term energy reliability and security are outlined, including an action addressing renewables:

"Renewables -- Accelerate the development and deployment of **promising renewable energy technologies** through the extension and expansion of state and federal production tax credits and state and tribal policies such as system benefit charges, portfolio standards, renewable resource-based utility tariffs, and/or creative new incentives."

#### Senate Energy Committee Hearing

At the Senate Energy Committee hearing, energy analysts and company officials said that California faces a serious risk of greater electricity crisis this summer with bigger, more frequent blackouts because of a severe drought in the Pacific Northwest that is draining hydroelectric power resources. The power shortage will also mean continued high electricity prices in states bordering California.

- In the "worst case scenario" - if the region's drought continues and summer electricity demand is very high - California could face more than 1,000 hours of blackouts this year, said Joe Bob Perkins, president of wholesale operations for **Reliant Energy**. "Essentially, California will have to be incredibly fortunate" to avoid blackouts this summer, he said. Recent blackouts in the state were caused by shortages of 500 MW, affecting 500,000 California households. If the worst-case scenarios come true, and shortages reach 5,000 MW, blackouts could last six hours at a time, affecting more than 20 million people, Perkins said.
- "We're going to be in a crisis situation this summer as well," said **Sen. Frank Murkowski (R-Alaska)**. **Sen. Diane Feinstein (D-Calif.)** believes that California will be short between 2,000 and 5,000 MW of power a day this summer.
- The Columbia River and Snake River regions are facing the fourth driest year on record, said **Sen. Gordon H. Smith (R-Ore.)**. The reservoir behind the Grand Coulee Dam, largest in the Northwest, is at its lowest level in 25 years, and water power from Columbia River dams that normally would be used this summer is being tapped now to help California through its current shortage, Smith noted.
- The **Northwest Power Planning Council** recently warned that the Northwest faces a 1-in-4 chance of power shortages. "There is a very high probability that the West Coast will face blackouts," said Judi Johansen, executive vice president of PacifiCorp, an electricity utility serving six western states.

Panelists agreed that California has few immediate options available to deal with continuing shortages this year. Although six power plants are under construction, most will not come on-line until 2002. The state should consider paying big industrial users to close their plants and use electricity they have contracted to receive, panelists said. It has been estimated that conservation by companies and residents could save an additional 600 MW a day.

#### *Sources:*

-Western Governors' Association website: [http://www.westgov.org/wga/press/energy\\_agree.htm](http://www.westgov.org/wga/press/energy_agree.htm)

-U. S. Senate Committee on Energy and Natural Resources <http://www.senate.gov/~energy/>

-Behr, Peter and William Booth, "Hot, Dark Summer Ahead for California," *The Washington Post*, page E1, February 1, 2001. <http://www.washingtonpost.com>

## CALENDAR OF EVENTS

| Date                 | Event                                                                                                                         | Location          | Other Information                                                                                                 |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>FEBRUARY 2001</b> |                                                                                                                               |                   |                                                                                                                   |
| 12-14                | CRN Technology Roadmap                                                                                                        | Atlanta, GA       | Steven P. Lindenberg, 703-907-5842                                                                                |
| 12-13                | Power Outages: Harbinger for Things to Come?                                                                                  | Washington, DC    | Nadine Harris 212-967-0095 x 238                                                                                  |
| 20-22                | Micro Power: Capitalizing on Distributed Energy Resource Strategies for Competitive and Reliable Power                        | San Francisco, CA | Bob Dixon is giving a talk entitled, "Distributed Energy Resources: What's New at the U.S. Department of Energy." |
| 19-22                | 4th Industrial Energy Efficiency Symposium                                                                                    | Washington, DC    | Sponsored by OIT; OPT will have a booth there; <a href="http://www.oitexpo4.com">www.oitexpo4.com</a>             |
| 22                   | Steel-Utility Workshop                                                                                                        | Washington, DC    | Peter Salmon-Cox; 202-586-2380                                                                                    |
| 28-March 1           | Electricity Restructuring Program Review                                                                                      | Washington, DC    | Larry Mansueti 202-586-2588; Tara Finck 202-479-2748                                                              |
| <b>MARCH 2001</b>    |                                                                                                                               |                   |                                                                                                                   |
| 8                    | NREL Brown Bag Series: Renewable Energy and Real Options Analysis                                                             | Washington, DC    | <a href="http://www.nrel.gov/events.html">www.nrel.gov/events.html</a>                                            |
| 20-24                | Distributed Generation Conference                                                                                             | San Diego, CA     | <a href="http://www.powerin.org">www.powerin.org</a>                                                              |
| 21-23                | 5th Annual Distributed Generation and On-site Power Conference                                                                | New Orleans, LA   | Pat Hoffman to give keynote address; <a href="http://www.dist-gen.com">www.dist-gen.com</a>                       |
| 22-24                | Building Energy Conference                                                                                                    | Boston, MA        | Jonathon Tauer 413-774-6051, ext. 20                                                                              |
| <b>APRIL 2001</b>    |                                                                                                                               |                   |                                                                                                                   |
| 2-3                  | Business Communications Company's 1 <sup>st</sup> Fuel Cell Conference                                                        | San Antonio, TX   | EERE representative to speak; <a href="http://www.buscom.com">www.buscom.com</a>                                  |
| 23-25                | Intertech's Fifth International Conference on Distributed Power                                                               | Washington, D.C.  | Hugh Olmstead; <a href="mailto:olmstead@intertechusa.com">olmstead@intertechusa.com</a> ; 207-281-9606            |
| <b>MAY 2001</b>      |                                                                                                                               |                   |                                                                                                                   |
| 1-3                  | Industrial Energy Technology Conference                                                                                       | Houston, TX       | <a href="mailto:jim@esl.tamu.edu">jim@esl.tamu.edu</a>                                                            |
| 9-10                 | Energy Management Conference                                                                                                  | San Diego, CA     | Sponsored by FEMP; <a href="http://www.aeecenter.org">www.aeecenter.org</a>                                       |
| 21-23                | Third Annual ICEPAG (International Colloquium and Exhibit on Environmentally Preferred Advanced Energy Generation) Conference | Newport Beach, CA | More Information next issue                                                                                       |
| 24-25                | Together with the First United Nations and DOE (FE and EE) Conference on Hybrid Power Systems                                 | Newport Beach, CA | More Information next issue                                                                                       |
| 30-31                | Fuel Cells Codes & Standards Summit V                                                                                         | College Park, MD  | <a href="mailto:ronald.fiskum@ee.doe.gov">ronald.fiskum@ee.doe.gov</a>                                            |

## CALENDAR OF EVENTS

| Date                | Event                                                                              | Location          | Other Information                                                                                                 |
|---------------------|------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>JUNE 2001</b>    |                                                                                    |                   |                                                                                                                   |
| 3-6                 | FEMP Energy 2001 Conference                                                        | Kansas City, MO   | <a href="http://www.energy2001.ee.doe.gov/">www.energy2001.ee.doe.gov/</a>                                        |
| 3-7                 | WindPower 2001 Conference                                                          | Washington, DC    | <a href="http://www.awea.org">www.awea.org</a> ; <a href="mailto:laura_keelan@awea.org">laura_keelan@awea.org</a> |
| 11-13               | International Symposium on Distributed Generation: Power System and Market Aspects | Stockholm, Sweden | <a href="http://www.ekc.kth.se/ees/workshop/DG.htm">http://www.ekc.kth.se/ees/workshop/DG.htm</a>                 |
| <b>JULY 2001</b>    |                                                                                    |                   |                                                                                                                   |
| 10-12               | Gas Storage Workshop                                                               | Kingston, Ontario | David Quinn; <a href="mailto:quinn-d@rmc.ca">quinn-d@rmc.ca</a>                                                   |
| <b>AUGUST 2001</b>  |                                                                                    |                   |                                                                                                                   |
| 29-Sep<br>3         | IEEC Integrated Energy Efficiency Congress                                         | Cleveland, OH     | Sponsored in part by FEMP; <a href="http://www.aeecenter.org">www.aeecenter.org</a>                               |
| <b>OCTOBER 2001</b> |                                                                                    |                   |                                                                                                                   |
| 24-26               | World Energy Engineering Congress                                                  | Atlanta, GA       | <a href="http://www.agcc.org">www.agcc.org</a>                                                                    |